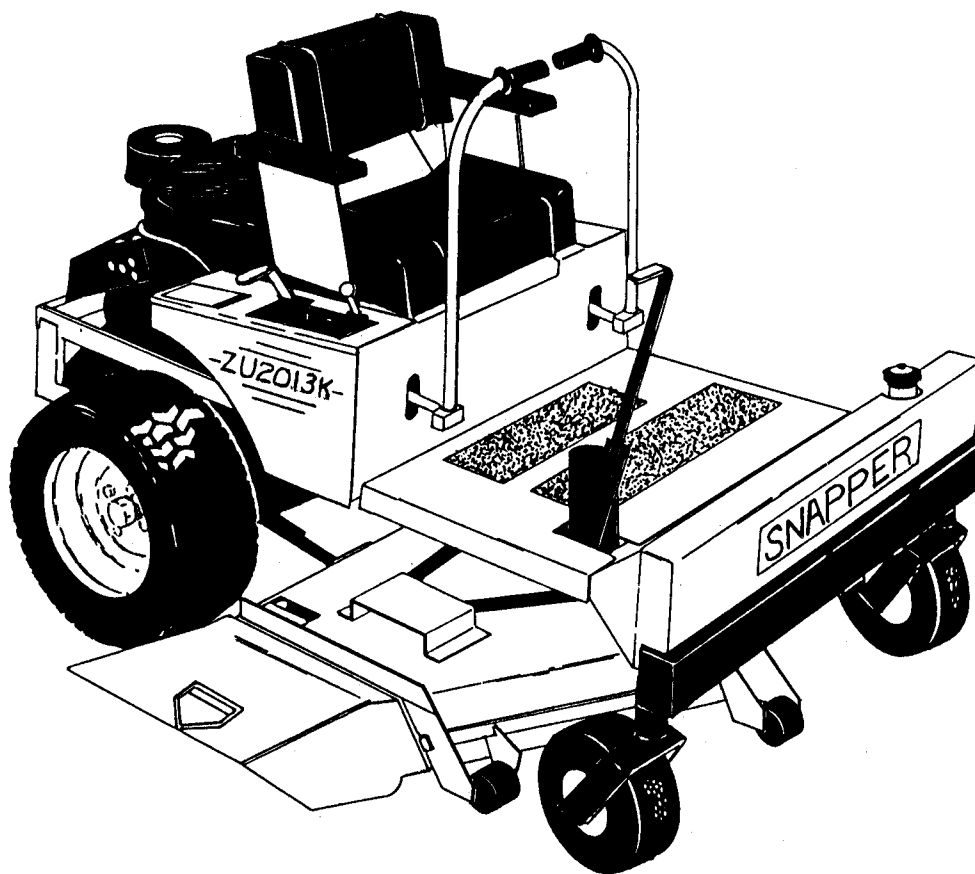


Safety Instructions & Operator's Manual for

SNAPPER®

ZU RIDING MOWER

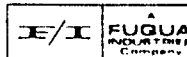


Thank you for buying a SNAPPER product! Your SNAPPER Zero Turning Radius Riding Mower was designed and built to provide long and satisfactory service. Keep in mind that it, like any other mechanical device, can be potentially dangerous if used improperly and that no accident prevention program can be successful without the wholehearted co-operation of the person responsible for the operation of the equipment. Study this manual and pay particular attention to the important Safety Precautions on pages 1-4. Following these instructions will help you continue to enjoy the trouble-free performance expected of a SNAPPER product.



SNAPPER POWER EQUIPMENT

McDonough, GA • 30253



SNAPPER ZU RIDER
WITH UNISTAT TRANSMISSION
ZERO TURNING RADIUS COMMERCIAL RIDING MOWER

CONGRATULATIONS upon acquiring your new Snapper ZU Rider Mower. We feel that you've made the right choice, and we at Snapper thank you for your patronage. The Snapper ZU Rider is probably different than other lawn mowers you've had. It is a fast, efficient, quality mower, and fun to drive. However, like all power machinery, the Snapper ZU Rider can become a dangerous piece of equipment if handled incorrectly. Read this entire Owner's Manual. It has important safety and maintenance information that is essential for you to know.

Each Snapper ZU Rider has been inspected by our quality assurance team and passed rigid testing procedures.

Be sure to read your Snapper ZU Rider warranty.

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SAFETY

Accident Patterns to Avoid

- I. CONTACT WITH THE ROTATING BLADE--This accident usually happens when the operator is clearing the discharge chute of grass, (especially when the grass is wet), or when the operator adjusts the machine without turning it off and waiting for the blades to completely stop.
- II. PROPELLED OBJECTS--Sticks, rocks, wires and other objects can be propelled out through the discharge chute or from under the mower housing. Bystanders are particularly vulnerable.
- III. GRASS CATCHER OR GUARD--The mower shall not be operated without either the entire grass catcher or the guard in place.
- IV. OVERTURNING--This happens when riding mowers are used on steep slopes, embankments or hills. The operator in these cases can come in contact with the blades or sustain injuries during a fall.
- V. MOWER RUNNING OVER THE VICTIM--This usually happens when a riding mower is driven in reverse. The accident victims are most often young children whom, unseen by the operator of the mower, were in the area being mowed.

AT SNAPPER, WE SHARE YOUR DESIRE TO PROTECT YOURSELF,
YOUR FAMILY, YOUR FRIENDS AND YOUR NEIGHBORS FROM ACCIDENTAL
INJURY. OBSERVING AND ENFORCING THE FOLLOWING GUIDELINES WILL
HELP TO INSURE THE SAFETY OF EVERYONE.

PLEASE BE CAREFUL!

SAFETY INSTRUCTIONS AND RECOMMENDATIONS

1. PEOPLE WHO OPERATE, SERVICE, OR ARE OTHERWISE ASSOCIATED with the Snapper ZU Rider should be trained in its proper use and warned of its dangers. Before operating, adjusting, or servicing the Snapper Unistat Mower they should read and understand this entire manual and the owner's engine manual.
2. AVOID CONTACT WITH MOVING PARTS. Keep hands and feet from under mowing deck and away from blades at all times. Turn engine (motor) off if you must unclog the chute.
3. KEEP YOURSELF AND ALL OTHERS AWAY FROM THE DISCHARGE CHUTE at all times. Never direct the discharge of material toward bystanders. Never allow anyone near the machine while in operation.
4. AVOID HILLS AND SLOPES. Use extreme caution when mowing up or down slopes. NEVER mow across the face of a slope. If a slope must be ascended, back up the slope; drive forward when descending. Reduce speed and use caution to start, stop and maneuver. To prevent loss of control on a slope avoid sharp turns, sudden changes in direction, and sudden stops and starts.
5. DISENGAGE POWER TO MOWER BEFORE BACKING UP. Do not mow in reverse unless ABSOLUTELY necessary and then only after turning around and observing the entire area behind the mower. Go slowly. Most "running over a victim" accidents occur in reverse.
6. BEGINNING OPERATORS SHOULD LEARN HOW TO STEER the Snapper ZU Rider before attempting to mow. Start with slow engine speed and drive without the blades engaged in open area until comfortable with the machine.
7. KNOW HOW TO STOP QUICKLY. Know the location and operation of every control, especially how to brake and how to disengage the mower blades.
8. DO NOT MOVE THE STEERING LEVERS from forward position to reverse position rapidly. The speed and/or direction of travel is affected instantly by the movement of the steering levers.
9. DO NOT ALLOW CHILDREN TO OPERATE MOWER. Do not allow others who have not had instruction to operate mower.
10. ALWAYS TURN ENGINE OFF AND REMOVE THE KEY before leaving the mower to prevent children and inexperienced operators from starting the engine. Never leave the mower unattended with engine running. Always wait for all moving parts and all sounds to stop before leaving the operator's seat. Always set the parking brake on an unattended mower.

11. WEAR STURDY, ROUGH-SOLED WORK SHOES AND CLOSE-FITTING SLACKS and shirts. Never operate the mower in bare feet, sandals or sneakers.
12. NEVER CARRY PASSENGERS.
13. KNOW THE AREA YOU ARE TO MOW. Watch for hidden dangers such as rocks, roots, sticks, holes, bumps and drop-offs, etc. Before mowing, pick up all debris in area to be mowed. Sharp and hard objects can be propelled at a high speed and can act like schrapnel. Walk through tall grass BEFORE MOWING to make sure there are no hidden dangers. Mow higher than desired in tall grass to expose any hidden objects and/or obstacles, clean the area, and then mow to the desired height.
14. NEVER REFUEL A MOWER INDOORS. Allow the engine time to cool before refueling. Unseen vapors may be ignited by a spark. Always clean up spilled gasoline. Never run the engine indoors in a garage or any other closed building. Allow engine to cool before storing in any enclosure. The engine exhaust and the gasoline fumes are dangerous.
15. NEVER REMOVE THE FUEL CAP or add gasoline to a running or hot engine or an engine that has not been allowed to cool for several minutes after running. Always make sure the gas cap is in place.
16. DON'T SMOKE AROUND THE MOWER or the gasoline storage container. Gasoline fumes can easily ignite.
17. KEEP GASOLINE IN A WELL-VENTILATED AREA away from your living quarters and in tightly-capped safety cans. Never store mower with gasoline in the tank inside a building where fumes may reach an open flame or spark.
18. DISENGAGE BLADE, STOP ENGINE AND REMOVE IGNITION KEY before any servicing. Be sure all moving parts and all sounds have stopped. Let engine cool and disconnect the spark plugs so the engine cannot start by accident. A SLIGHT ROTATION OF THE BLADE COULD START THE ENGINE.
19. KEEP ALL NUTS, BOLTS, AND SCREWS TIGHT to be sure equipment is in safe working condition, especially blade mounting bolts.
20. VEHICLE SHOULD BE STOPPED AND INSPECTED FOR DAMAGE after striking a foreign object and the damage should be repaired before restarting and operating the equipment. Stop immediately and check for damage or loose parts if mower should start vibrating.

21. DISENGAGE BLADES BEFORE DRIVING ACROSS WALKS or projecting objects.
22. KEEP SAFETY DEVICES AND GUARDS IN PLACE. If any of the safety switches become inoperable, have them repaired immediately.
23. DON'T STEP OR STAND ON THE MOWER HOUSING; step or stand only on the foot deck.
24. WATCH OUT FOR TRAFFIC near roadways and when crossing roads.
25. THIS MACHINE IS NOT MEANT FOR HIGHWAY or street use. It is not a recreational vehicle and it should not be operated as such.
26. DO NOT USE MOWER WHEN GRASS IS WET OR SLIPPERY.
27. KEEP MACHINE AND ENGINE CLEAN -- free of grease, dirt, grass, leaves and other foreign build-up to reduce overheating and a possible fire hazard.
28. MOW ONLY DURING DAYLIGHT.
29. ALWAYS DISENGAGE THE MOWER BLADE CLUTCH when transporting.

SAFETY INTERLOCK SYSTEM

Your Snapper ZU Rider is equipped with four sets of switches interlocked for your safety.

1. The mower blades must be disengaged before the engine will start.
2. The control levers must be in neutral position and swung outward before engine will start.
3. The engine will stop if the mower clutch is engaged when the operator leaves the driver's seat.
4. The engine will stop if the parking brake is "on" and the control levers are put in the drive position.

DO NOT OPERATE MOWER IF THESE
SWITCHES ARE NOT OPERATING PROPERLY

START-UP AND OPERATION

Checklist Before Operation

1. Make sure fuel tank is full. Use regular gasoline.

```
*****
*                                     *
*          ▲      WARNING      ▲      *
*   HANDLE GASOLINE WITH CARE--IT IS HIGHLY FLAMMABLE. *
*   DO NOT SMOKE. ENGINE SHOULD BE OFF AND COOL. USE  *
*   APPROVED GAS CONTAINER. NEVER FILL TANK INDOORS.  *
*   WIPE UP ANY SPILLS. REPLACE CAP TIGHTLY.          *
*                                     *
*****
```

2. Make sure dirt and other foreign matter is kept out of gas tank. Use a clean funnel and gas can.
3. Do not mix oil with the gasoline.
4. Do not use white, high test or premium gasoline. Do not use de-icers, carburetor cleaners, or other such additives. Gasahol is not recommended. Using lead-free gas produces fewer combustion deposits, but it could shorten the engine life if the carburetor adjustment is too lean.
5. Check the crankcase oil level. Make sure the engine is off. The mower should be parked on a level area. Don't overfill. (See your engine manual for more detailed instructions.)
6. Check the hydrostatic transmission (Unistat) oil level. (See maintenance page for detailed instructions.)
7. Check battery fluid level.
8. Inspect V-belts.
9. Check tire pressure: Front tires = 20 psi
Rear tires = 24 psi
10. Make sure underside of mower deck is free of grass.
11. Make sure mower blades are sharp and secured tightly.
12. Clean the air intake screen on the engine if necessary.
13. Perform any other maintenance as it becomes necessary. (See the "Maintenance" section of this manual.)

```
*****
*                                     *
*   IMPORTANT: Before cutting grass, clutch must be  *
*   broken-in as follows: With engine at full RPM   *
*   engage deck until blades come to full speed and *
*   then disengage until blades come to a complete  *
*   stop. Repeat 10 times to seat clutch properly.  *
*                                     *
*****
```


Control Locations

Ignition Key - RH panel beside seat

Engine Throttle - RH panel beside seat

2 Steering Levers/Speed Control - In front of seat at side.

Blade Clutch Switch - RH panel beside seat.

Parking Brake Lever - RH panel beside seat.

Blade Height Adjustment Lever - RH side of deck on floor.

Choke - LH panel beside seat.

Unistat Unlock Control - On top of the right Unistat mounting block. On bottom of the left Unistat mounting block (See pg. 8)

Manual Park Lock Release Lever - At the rear of each Unistat. (See pg. 8)



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*****
*                                     *
*          ▲      WARNING      ▲      *
*  AVOID INHALING EXHAUST FUMES--CARBON MONOXIDE *
*  GAS IS COLORLESS AND ODORLESS, AND CAN CAUSE *
*  UNCONSCIOUSNESS, AND IS POTENTIALLY LETHAL. *
*  DO NOT RUN LAWN MOWER IN GARAGE OR OTHER *
*  CONFINED AREA. *
*****
```

TO START



1. MOVE CONTROL LEVERS TO "OUT" position by pushing each one straight sideways from neutral position.
2. SET PARKING BRAKE: The parking brake is on the right side beside the seat. Pull rearward to set.
3. DISENGAGE MOWER BLADE clutch by moving clutch switch to OFF (left) position.
4. SET ENGINE THROTTLE CONTROL to "Start" position (1/4 to 1/2 throttle). SET CHOKE CONTROL as required.
5. TURN IGNITION KEY to "start" position and release to "run" as soon as engine starts. NOTE: Prolonged cranking will damage starter motor and shorten the battery life.
6. ADJUST ENGINE THROTTLE for desired engine speed. BACK OFF CHOKE as engine warms.
7. RELEASE PARKING BRAKE: Push brake lever forward to release. It is usually necessary to swing control levers "in" and gently move control levers forward and back to release parking pawl.

 * IMPORTANT: If the operator is inexperienced with the Snapper *
 * ZU Rider type of lever steering and speed control, he/she *
 * should follow these recommendations: Disengage the mower *
 * blades. Go very slowly until thoroughly familiar with the *
 * machine. Keep away from fences, buildings, and other *
 * obstructions. While becoming familiar with the machine, *
 * move the levers smoothly and slowly. Practice until *
 * operation is smooth and efficient. *

8. TO DRIVE move the control levers to the "in" position. Push both levers forward to move forward. Move levers slowly forward to increase speed. To reverse direction, pull both levers slightly back. To turn, move the lever on the side to which you want to turn slightly rearward of the other lever. To turn on a zero radius axis, go slowly and pull one lever back and push the other lever forward, depending on which direction you wish to turn.

 *  CAUTION  *
 * FOR SMOOTH, SAFE OPERATION MOVE THE CONTROL LEVERS FORWARD *
 * AND REARWARD IN A GENTLE, SLOW MOTION. NEVER PULL OR PUSH *
 * THE CONTROL LEVERS RAPIDLY, ESPECIALLY ON GRADES OR SLOPES. *

9. BRAKING: To brake mower you gently move both levers in the direction opposite to travel.
10. CUTTING HEIGHT IS ADJUSTED by using the Blade Height Adjustment Lever on the right side of the deck on the floor. Adjust HIGHER by moving the lift lever to the right to clear the peg holes and pulling the release lever rearwards. Set it in one of the peg holes to secure height. Adjust LOWER by pushing the released lever forward and setting it.
11. ENGAGE MOWER BLADE CLUTCH by moving the blade clutch switch to ON. The engine will not start if the blade clutch is engaged. If the operator is not in the seat, the engine will stop if the clutch is engaged.

 *  CAUTION  *
 * AVOID HILLS AND SLOPES. USE EXTREME CAUTION WHEN MOWING UP *
 * OR DOWN SLOPES. NEVER MOW ACROSS THE FACE OF A SLOPE. IF *
 * A SLOPE MUST BE ASCENDED, BACK UP THE SLOPE; DRIVE FORWARD *
 * WHEN DESCENDING THE SLOPE. *

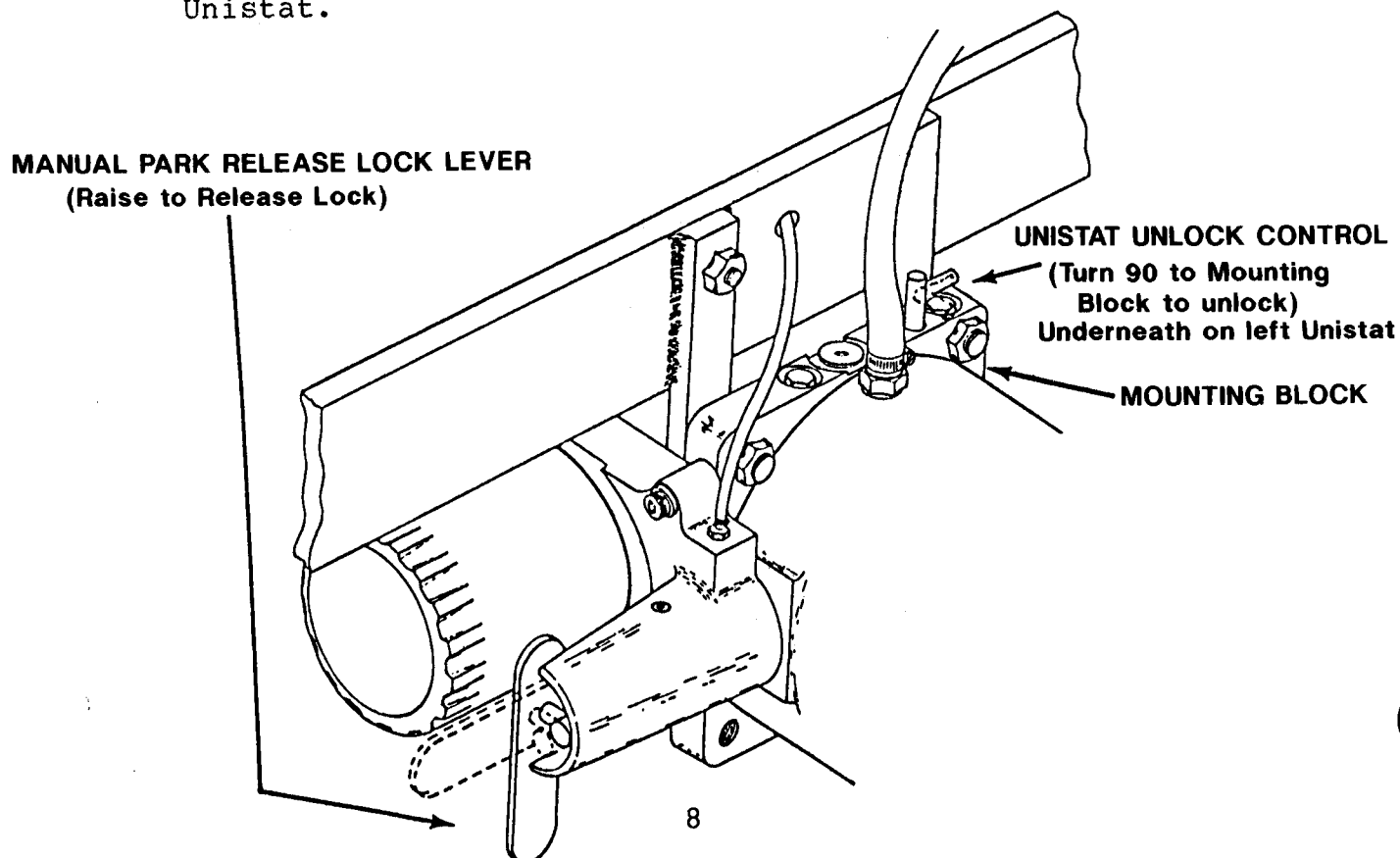
12. TO STOP:

- A. Move the control levers to the neutral position and then to the "out" position.
- B. Set the parking brake.
- C. Disengage the mower blade clutch by moving the clutch switch to the OFF (left) position.
- D. Turn the ignition key to the "lock-off" position.
- E. Remove the key and wait for all movement and all sound to cease before dismounting.

* ⚠ CAUTION ⚠ *
* WHEN LEAVING THE MOWER UNATTENDED, ALWAYS REMOVE THE KEY *
* AND SET THE PARKING BRAKE, EVEN IF JUST FOR A FEW MOMENTS. *
* HELP PROTECT CHILDREN AND OTHER UNAUTHORIZED PERSONS FROM *
* ACCIDENTS. *

13. TO FREEWHEEL UNIT:

Unlock Unistats to freewheel unit. The Unistat unlock control must be turned 90 degrees to the mounting block of the Unistat, and the manual park lock lever turned parallel to the ground surface. The Unistat unlock control is on top of the right Unistat (shown) and the bottom of the left Unistat.



14. BUZZER WARNINGS:

The ZU Rider is equipped with a warning buzzer which is actuated when the engine oil pressure is too low. The buzzer will sound when the ignition key is turned "on" and will stop as soon as the engine starts and the oil pressure is in the safe operating zone. It may also sound if the oil level is too low or if the mower is operated for prolonged periods on slopes. To correct check the engine oil level and fill as required and/or operate mower on less severe slopes.

The warning buzzer will also sound if the temperature of the oil in the transmission oil reservoir is too high. To correct make sure there is sufficient oil in the reservoir and clean the transmission fan and cooling fins.

MOWING RECOMMENDATIONS

1. Keep mower blades sharp.
2. Make sure deck and discharge chute is clean.

```
*****  
*                                     *  
*                               CAUTION                               *  
*      POWER MUST BE OFF TO CLEAN CHUTE      *  
*****
```

3. When mowing tall grass, make two passes, mowing off 1/2 the grass height the first pass, and then the desired height the second pass. Check for hidden dangers first.
4. Go slowly for trimming.
5. Always cut grass with the engine at full throttle speed. This ENGINE speed allows the cutting blades to operate at optimum cutting speed. Control GROUND speed with the steering levers.

SPECIFICATIONS

Length ----- 73"

Width ----- 48"
 with 48" Deck (including Chute) ----- 59"
 60" Deck (including Chute) ----- 75"

Height ----- 42"

Weight with 48" deck ----- Approx. 950 lbs.

Cutting Width ----- 48" Deck ----- 48"
 60" Deck ----- 60"

Blades ----- 48" Deck ---- 3 - 17" Blades
 60" Deck ---- 3 - 21" Blades

Cutting Height ----- 2" to 4"

Fuel Tank ----- 4 Gallon
 Note: 4 gal. tank has approximately 2 gal.
 reserve when gauge shows empty.

Hydrostatic Transmission (Unistat) ----- Shivers

Unistat Oil Filter ----- NAPA 1042, WIX 51042,
 FRAM PH-3432 or equiv.

Unistat & Reservoir
oil capacity ----- approx. 7qts.

Unistat oil type ----- Synthetic Automatic
 Transmission fluid

Engine ----- 20 HP Kohler Magnum Twin

Engine to Unistat Belt ----- A-128 Kevlar

Engine to Deck Belt ----- 48" Deck -- BP-84
 60" Deck -- BP-87

Mower Deck Belt ----- 48" Deck --- AP-105
 60" Deck ---- A-112

Mower Deck ----- 3/16" steel

Blade Spindles ----- 25 mm HD bearings
 top and bottom

Front Tire ----- 13-5.00 x 6

Drive Tire ----- 4 ply ---- 20 x 8.00 - 10

MAINTENANCE

```

*****
*
*                               CAUTION                               *
* BEFORE PERFORMING ANY MAINTENANCE, TURN OFF ENGINE,                *
* REMOVE KEY AND DISCONNECT SPARK PLUGS. USE EXTREME                  *
* CARE WHEN WORKING ON MACHINERY. DO NOT WEAR WATCH                   *
* OR JEWELRY, DO NOT WEAR LOOSE FITTING CLOTHES, AND                 *
* OBSERVE ALL COMMON SAFETY PRACTICES WITH TOOLS.                     *
*****

```

MAINTENANCE SCHEDULE

<u>Service</u>	<u>When</u>
check crankcase oil level	before each use
clean air intake screen	after each use
clean grass under deck	after each use
check tire pressure	every 10 hours
check battery fluid	every 10 hours
sharpen mower blades	every 10 hours
clean air filter element	every 10 hours
check hydrostatic transmission fluid	every 25 hours
change engine crankcase oil	25hrs.(5 hrs. break-in)
check drive belts (3)	every 25 hours
clean debris from fans and hydrostats	every 25 hours or more often under dirty conditions
replace air filter element	annually
check spark plugs	annually
service battery	annually
lubricate deck fittings-three "shots" only	every 100 hrs.
lubricate front wheels	annually
replace fuel filter or filters	annually
change hydrostatic transmission fluid and filter on each UNISTAT	annually or 500 hours(100 hrs. break-in)
decals	Replace when illegible Write factory for free replacement

MAINTENANCE INSTRUCTIONS

1. ENGINE:

For complete maintenance and operating information for your engine, please refer to your engine operating and maintenance instructions furnished by the engine manufacturer and included in your Snapper ZU Rider information packet.

NOTE: Air intake screen must be kept clean. If plugged, engine may be seriously damaged by over heating.

2. BATTERY:

```
*****
*                                     *
*          ▲      CAUTION      ▲      *
*   Battery electrolyte is a poisonous and corrosive *
*   sulfuric acid solution. Avoid spilling on skin,  *
*   eyes and clothing.                               *
*****
```

Keep the electrolyte level above the plates in each cell by adding distilled water as it becomes necessary. Add water just before operating the mower to mix the water with the solution. Be careful not to overfill the battery--the electrolyte solution is corrosive and can cause damage to surrounding metal parts if it should spill. Keep your battery at 1.260 specific gravity charge. When taking the battery out of the mower for servicing, make sure to connect the cables to the battery exactly as they were prior to removal.

Keep the battery clean. Remove corrosion around the battery terminals by applying a solution of one part baking soda to four parts water. Coat all exposed terminal surfaces with a light layer of grease or petroleum jelly to prevent corrosion.

```
*****
*   NOTE: At temperatures below 32 degrees F (0 deg C) *
*   the full charge state must be maintained to prevent *
*   electrolyte from freezing and causing battery damage. *
*****
```

3. Tires

Correct tire pressure is essential for efficient operation of the mower. Check tire pressures periodically. Inflate tires to the pressures listed below:

Front Tires: 20 PSI
Rear Tires: 24 PSI

Lug nuts should be regularly checked for tightness.

4. Mower Blades

Check sharpness of mower blades after every 10 hours of operation. To sharpen the blades proceed as follows:

```
*****
*                                     *
*          ▲ CAUTION ▲               *
*   STOP ENGINE, REMOVE IGNITION KEY AND   *
*   REMOVE SPARK PLUGS FOR SAFETY.         *
*                                     *
*****
```

- A. Remove bolt, lockwasher, cup washer, and large flat washer mounting blade on shaft. Remove blade.
- B. Sharpen blade with a hand file, electric grinder or an electric blade sharpener. Wear gloves and eye protection when sharpening. Grind blade at original bevel.
- C. Check balance of blade by positioning the blade on a nail or blade balance pedestal. Grind the blade on the end that is heavier, until both sides balance.
- D. Install blade, large flat washer, cup washer, lockwasher and bolt. Make sure to tighten the bolt to 60ft.-lbs.

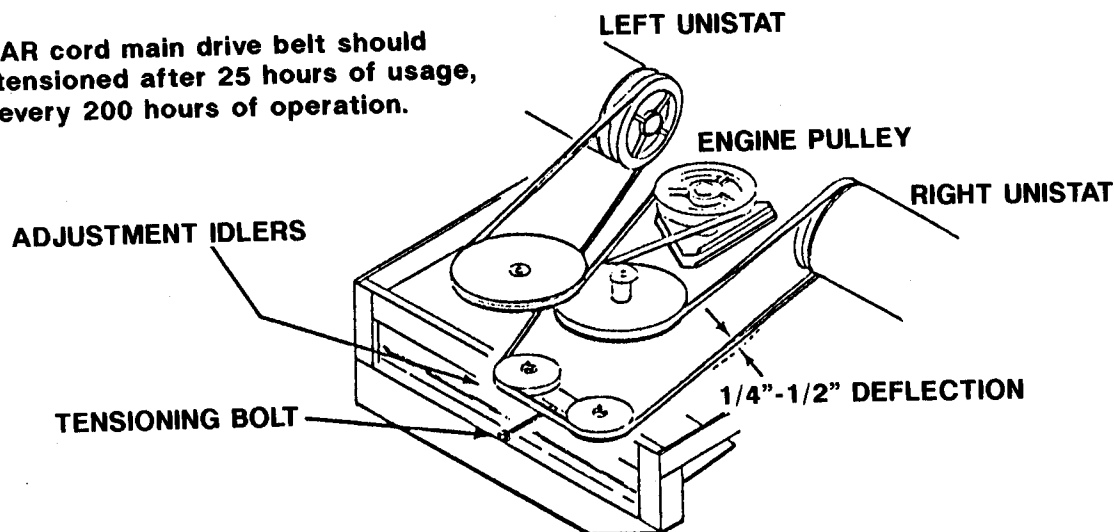
5. V-Belts

There are 3 V-belts on your Snapper ZU Rider. The two deck belts are equipped with spring-loaded belt tighteners and do not require tightening adjustments. They should be checked after every 25 hours of use to make sure they are in good operating condition. Replace any belts found to be in poor condition.

The main drive belt for the Unistats is a Kevlar cord belt and requires little maintenance. Tension should be checked after the first 25 hours of operation, then every 200 hours thereafter. Readjust to 1/4"-1/2" deflection by tightening the adjustable idlers at the rear bumper. See item #12 on page 16.

NOTE: After adjustment unit should be run for a few minutes to distribute tension in the entire length of belt. Then recheck the tension.

KEVLAR cord main drive belt should be retensioned after 25 hours of usage, then every 200 hours of operation.



7. Lubrication

A. Engine

Follow engine manufacturer's recommendations.

B. Wheels

Lubricate front wheel axles after every 100 hours of operation.

C. Deck Spindles

Lubricate each spindle with "three shots only" every 100 hours of operation.

D. Hydrostatic Transmission (Unistat): Checking and Replenishing Oil

i. Check the oil level in the reservoir after every 25 hours of usage.

```
*****
*
*   IMPORTANT:  CLEAN THE DIRT FROM AROUND THE RESERVOIR
*   BEFORE REMOVING THE CAP.  USE ONLY A SYNTHETIC
*   UNIVERSAL AUTOMATIC TRANSMISSION FLUID.  USE OF ANY
*   OTHER FLUID WILL VOID THE UNISTAT HYDROSTAT WARRANTY.
*****
```

a. Remove oil reservoir cap.

b. Check fluid level when cold. The level should be above the "ADD" mark when cold. It may be above the "FULL" mark when hot.

c. Do not over fill. If unit is overfilled, heat expansion will cause it to run over.

d. When checking oil level be very careful to keep the reservoir clean and to fill only with clean oil. Dirt or water in the oil can ruin the hydrostatic transmission (Unistat).

ii. Hydrostatic fluid should be changed annually or every 500 hours, whichever comes first. Unistats should be refilled using only SYNTHETIC Universal Automatic Transmission Fluid. The fluid is changed as follows:

a. Park mower on a level surface, stop engine, remove drain plugs from both pump and motor housings on Unistat. Allow the fluid to drain out. Remove the filter at this time.

b. Reinstall the bottom drain plugs and new filter.

c. Refill Unistat through the reservoir. This will require approximately 7 quarts of the ATF.

d. Start engine and add oil as required to maintain level in the reservoir. Replace oil reservoir cap.

e. Check reservoir level after running 1/2 hour.

IMPORTANT!

Use ONLY a SYNTHETIC Automatic Transmission Fluid in the Hydrostat transmissions (Unistat). Use of petroleum base transmission fluid will void the warranty of the Unistat.

If synthetic transmission fluid is not locally available, contact one of the following sources.

MOBIL PRODUCT SERVICES, at 1-800-662-4525.

These people will be glad to refer you to a distributor or dealer in your area, who handles this product.

AMSOIL PRODUCT CENTERS - The nearest Product Center will be happy to refer you to a dealer, or to help you obtain their product

8. Steering Lever Adjustment

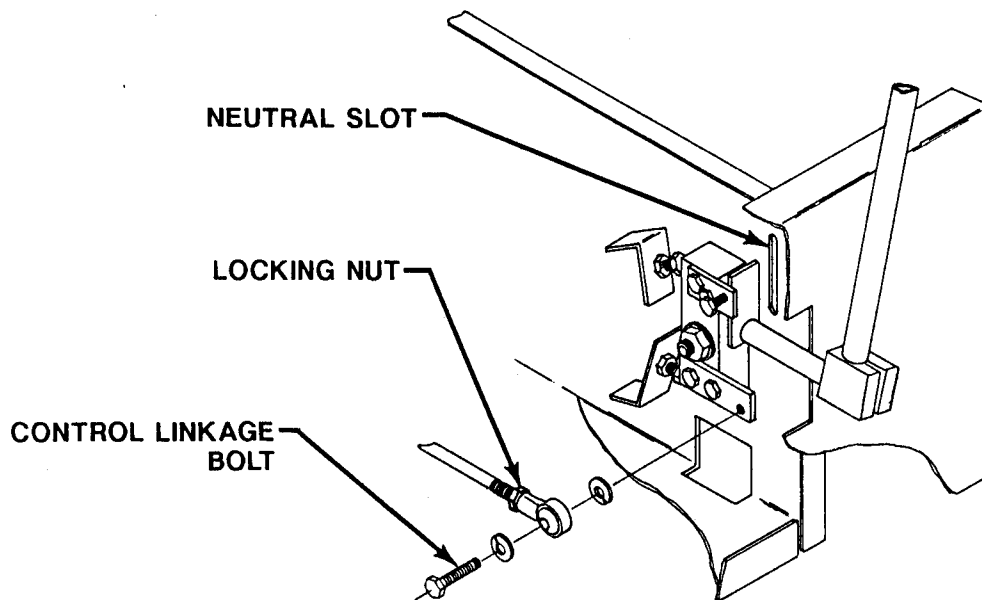
If the machine travels either forward or rearward when the steering levers are in the neutral position adjust as follows:

A Left Wheel Adjustment:

- a. Tilt the seat forward to gain access to the rotary mount blocks.
- b. If control lever does not rotate freely into neutral slot without forward or back pressure on the handles, adjust as follows: Remove the control linkage bolt from the rotary mount. Loosen the locking nut and adjust the linkage to fit. Neutral is found in the Unistat internally.
- c. When properly set, retighten the nut and install the control linkage bolt as shown below.

B Right Wheel Adjustment:

The right wheel is adjusted similarly.



9. Parking Brake Adjustment

The parking brake is automatically adjusted in the Unistat. If the park brake fails to hold, repair of the Unistat is required.

10. Hydrostatic Transmission (Unistat)

After every 10 hours of operation, lift the seat and be sure that the cooling fins of the Unistats are clean. Never wash across top of reservoir with water or steam. Excessive accumulation of oil, dirt, or trash may cause the Unistat to over heat. Lubricate Unistat as per guidelines under Hydrostatic Transmission (Unistat) "Lubrication" section of this manual. (see pg. 14)

11. Scalper roller bolts

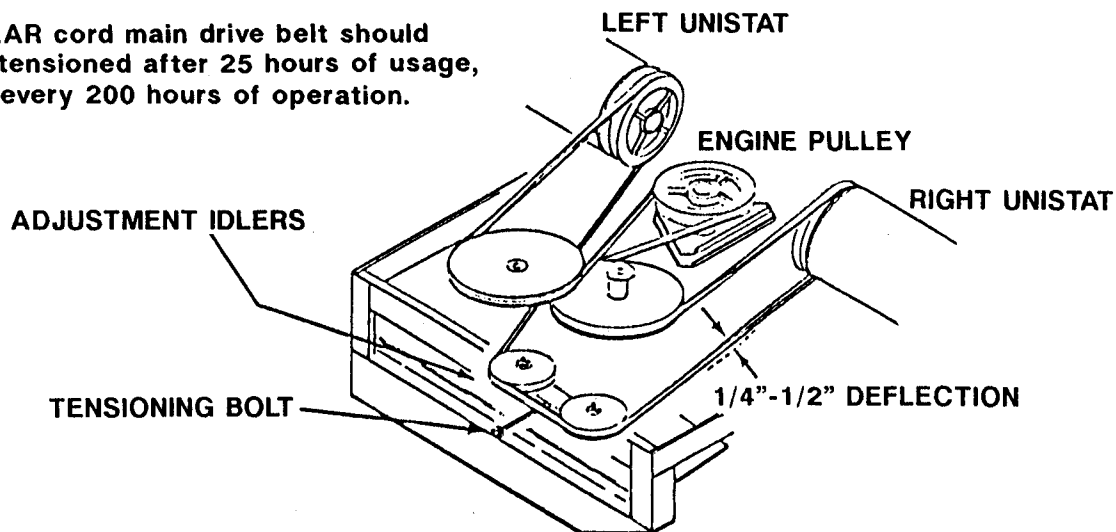
Scalper roller bolts should be tightened until the spacing bushing will not turn relative to the scalper bracket to prevent undue wear on the end of the spacer bushing and the scalper bracket. The proper torque is from 17 to 20 ft. lb.

12. Unistat drive belt tension adjustment

In normal use the Unistat drive belt tension should be checked after the first 25 hours of use for normal wear in and stretch. It may be adjusted as follows:

- a. Loosen the two nuts holding the Vee pulleys until the pulley idler slide can be just moved relative to the mounting bracket. This will require backing off these nuts approximately one turn.
- b. Tighten the tension adjust bolt until the belt is tight enough to prevent belt slippage. Belt should deflect approximately 1/4" to 1/2" under moderate pressure. Do not over tighten.
- c. Retighten the nuts holding the pulleys to lock the adjustment. Tighten tensioning bolt 1/4 turn to set lockwasher. This will prevent loosening of tension bolt.

KEVLAR cord main drive belt should be retensioned after 25 hours of usage, then every 200 hours of operation.



Trouble Shooting Checklist

1. Engine won't turn over.

Mower blades engaged:-----	disengage blades.
Drive not in neutral:-----	neutralize control levers
Dead Battery:-----	charge or replace.
Solenoid:-----	consult dealer.
Ignition switch:-----	consult dealer.
Starter:-----	consult dealer.

2. Engine will turn over; won't run.

No gas:-----	refuel. clean or replace fuel filters
Over or under choked-----	adjust choke.
Spark plugs not firing:-----	check spark plug condition and reset gap.*
Carburetor maladjustment:-----	reset carburetor adjustment.*
Ignition switch:-----	consult dealer.

3. Hard to start engine.

Fuel line clogged:-----	clean fuel line and check fuel filter.
Faulty fuel pump:-----	consult dealer.
Spark plug wire grounded or loose:-----	check spark plug wires.
Spark plug(s) faulty or improperly gapped:-----	check spark plug condition and reset gap.*
Electronic ignition defective:-----	consult dealer.
Dirty or maladjusted carburetor:-----	readjust carburetor* or consult dealer for carburetor service.

*NOTE: See engine manual for engine adjustments.

4. Engine starts, but cuts out.

Water in gas:-----	drain old gas and replace with new gas.
Clogged fuel line:-----	check fuel filter and clean fuel line.
Vent in fuel cap plugged:-----	check vent.
Faulty fuel pump:-----	consult dealer.
Maladjusted carburetor:-----	readjust carburetor.*

5. Engine knocks.

Low oil level:-----	check and add oil.
Ignition timing off:-----	consult dealer.
Fuel octane too low:-----	drain gas and replace with higher octane gas
Overheated engine:-----	shut off engine and allow to cool.

6. Engine sometimes skips at higher speeds.

Incorrect ignition timing:-----	consult dealer.
Carburetor maladjustment:-----	readjust carburetor*
Faulty, fouled or incorrectly gapped plug:-----	check spark plug condition and gap.

7. Engine overheated.

Air intake screen or fins clogged:-----	clean intake screen and fins.
Fuel mixture too lean:-----	readjust carburetor.*
Oil level too low or too high:-----	adjust oil level as necessary.
Improper ignition timing:-----	consult dealer.

8. Engine idles poorly.

Carburetor maladjustment:----- readjust carburetor.*
Improper spark plug gap:----- check the condition and gap of spark plug.*

9. Engine backfires.

Carburetor maladjustment:----- readjust carburetor.*
NOTE: Engine backfire on shutoff is common.

10. Engine runs, but mower won't move forward.

Unistat locks in unlock position:----- put into lock position.
Drive belt broken:----- replace
Unistat oil low:----- add oil
Not enough tension on drive belt: ----- check tension
Bad Unistat:----- consult dealer.

11. Mower loses power or Unistat overheats.

Hydro. trans. oil too low or too high:----- adjust as necessary.
Unistat damage:----- consult dealer for service.

12. Engine stalls when blades are engaged.

Seat switch not operated:-----Adjust actuator plate
Faulty interlock system:----- consult dealer.
Bad blade spindle bearings ----- consult dealer.
Drive belt not properly routed ----- reroute.
Blades blocked by foreign material ----- clean under deck.

*NOTE: See engine manual for engine adjustments.

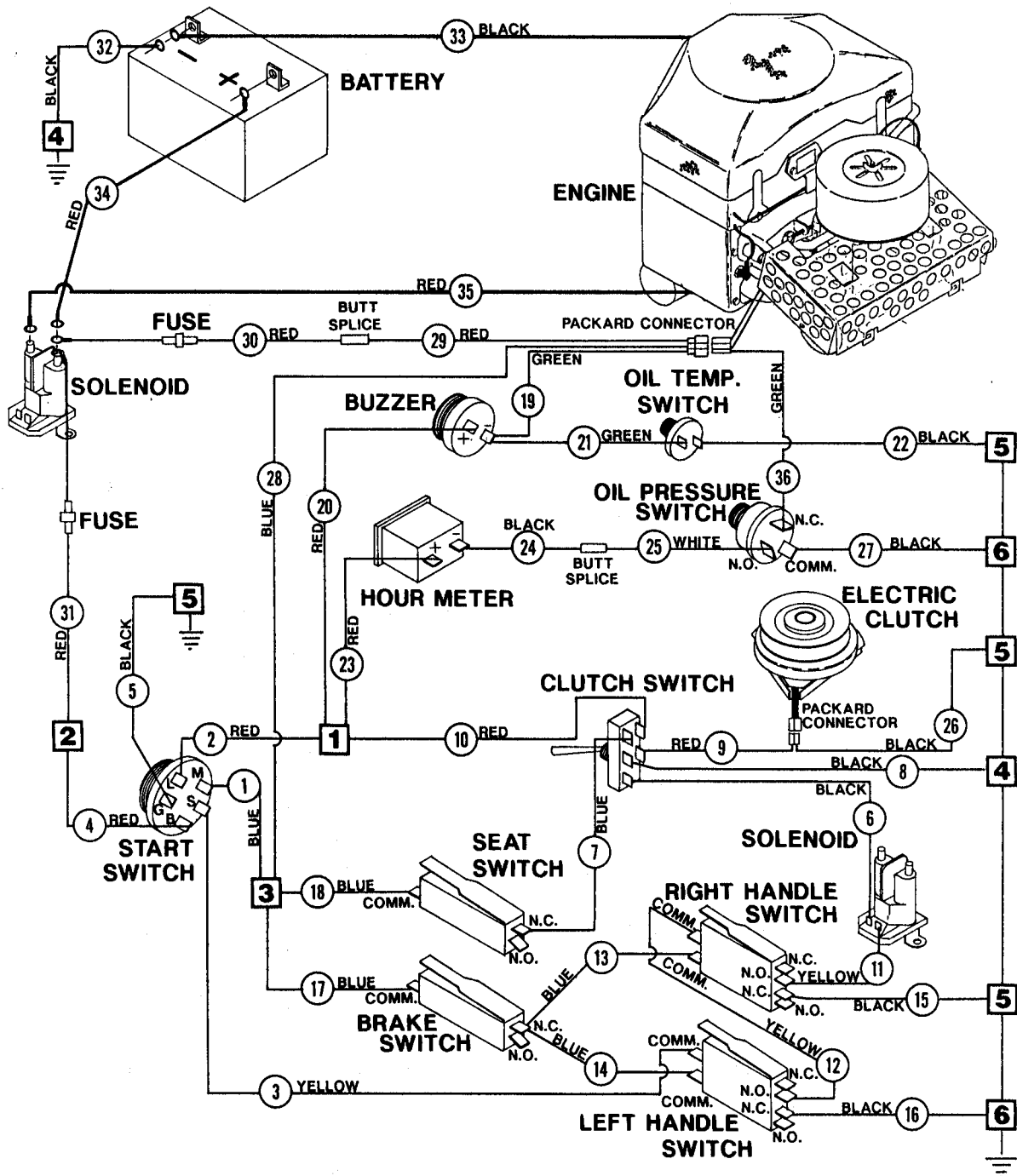
WIRING DIAGRAM

□ = TERMINAL NO. ON 6 PT. TERMINAL STRIP
○ = WIRE NO.

RED WIRES= POWER
BLACK WIRES= GROUND
BLUE WIRES= KILL CIRCUIT
YELLOW WIRES= START CIRCUIT
GREEN WIRES= SIGNAL CIRCUIT
WHITE WIRES= ALTERNATE GROUND

START SWITCH	
POSITION	CIRCUIT "MAKE"
1. OFF	G+M
2. RUN	B+L
3. START	B+L+S

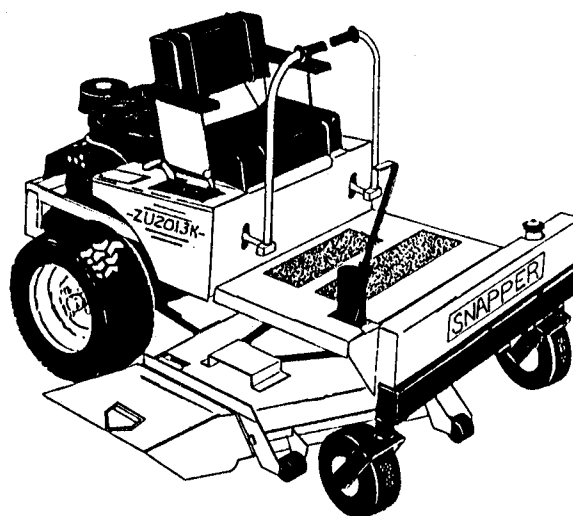
NOTE: FOR EASE OF PRESENTATION THE STARTER SOLENOID IS SHOWN TWICE.



SNAPPER

ZU RIDING MOWER

MANUFACTURER'S LIMITED WARRANTY



For two (2) Years from purchase date for the original purchaser's residential, noncommercial use, (one (1) year from purchase date for the original purchaser's commercial, rental, or other non-residential use), SNAPPER POWER EQUIPMENT, through any SNAPPER dealer will replace, free of charge any part or parts found upon examination by the factory at McDonough, Georgia, to be defective in material or workmanship or both.

All transportation cost incurred by the purchaser in submitting material to a SNAPPER dealer for replacement under this warranty must be born by the purchaser.

The UNISTAT hydrostatic transmission is warranted for 3 years from the date of purchase, provided the unit is serviced annually by a SNAPPER dealer. To validate the warantee, proof of service (substantiated by a receipt from servicing dealer or approved service center) must be provided along with the warantee claim.

This warranty does not apply to engines and their components, as these items are warranted separately by their manufacturers, and does not apply to batteries which are covered separately. This warranty does not apply to normal wear items such as belts or blades. This warranty does not apply to parts that have been damaged by accident, alterion, abuse, improper lubrication, normal wear, or other cause beyond our control.

There is no other express warranty.

Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to two (2) years from purchase date for the original purchaser's residential, non-commercial use (one (1) year from purchase for the original purchaser's commercial, rental or other non-residential use), and to the extent permitted by law any and all implied warranties are excluded. This is the exclusive remedy. Liabilities for consequential damages, under any and all warranties are excluded.

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WARNING: THE USE OF REPLACEMENT PARTS OTHER THAN GENUINE SNAPPER PARTS MAY IMPARE THE SAFETY OF SNAPPER PRODUCTS AND WILL VOID ANY LIABILITY AND WARRANTY BY SNAPPER ASSOCIATED WITH THE USE OF SUCH PARTS.

IMPORTANT: Please fill out the attached SNAPPER Product Registration Card immediately and Mail to:



SNAPPER POWER EQUIPMENT
McDonough, GA • 30253



SERIAL NUMBER LOCATIONS

1. Mower frame serial number is located on right rear side of frame beside engine.
2. Deck serial number is located on left front side of mower deck housing.
3. The UNISTAT serial numbers are located on the rear of the square mounting block of the hydrostat.
4. Engine code number is located on back center of engine.

RECORD OF PURCHASE

DATE MOWER PURCHASED _____
month, day, year

MOWER PURCHASED FROM _____
dealer name and phone number

MOWER MODEL _____

MOWER FRAME SERIAL NUMBER _____

MOWING DECK SERIAL NUMBER _____

RIGHT UNISTAT SERIAL NUMBER _____

LEFT UNISTAT SERIAL NUMBER _____

ENGINE CODE NUMBER _____